

WHAT IS CLAIMED IS:

1. An ink jet recording apparatus comprising:  
a recording head for recording data on a  
recording medium by discharging ink from a plurality  
5 of discharge ports;  
a carriage having the recording head mounted  
thereon for reciprocally scanning the surface of said  
recording medium;  
recording medium carrying means for carrying  
10 said recording medium by a predetermined distance in  
the direction perpendicular to said scanning  
direction of the carriage each time the carriage  
reciprocally scans the surface of said recording  
medium;  
15 an ink storage tank placed in a position where  
reciprocal scanning by said carriage and carrying of  
said recording medium by said recording medium  
carrying means are not affected by the ink storage  
tank;  
20 a supply tube for supplying ink from the ink  
storage tank to said recording head; and  
said control means for controlling ink discharge  
states of said recording head in accordance with an  
image signal input from a host computer; wherein  
25 said control means controls the scanning speed  
of said carriage in accordance with the temperature  
of the ink supplied from said ink tank to said ink

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supply tube.

2. An ink jet recording apparatus comprising:

a recording head for recording data on a  
5 recording medium by discharging ink from a plurality  
of discharge ports;

a carriage having the recording head mounted  
thereon for reciprocally scanning the surface of said  
recording medium;

10 recording medium carrying means for carrying  
said recording medium by a predetermined distance in  
the direction perpendicular to the scanning direction  
of said carriage each time the carriage reciprocally  
scans the surface of said recording medium;

15 an ink storage tank placed in a position where  
reciprocal scanning by said carriage and carrying of  
said recording medium by said recording medium  
carrying means are not affected by the ink storage  
tank;

20 a supply tube for supplying ink from the ink  
storage tank to said recording head; and

said control means for controlling ink discharge  
states of said recording head in accordance with an  
image signal input from a host computer; wherein

25 the control means controls a non-recording time  
during which no ink is discharged from said recording  
head in accordance with the temperature of the ink

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supplied from said ink tank to said ink supply tube.

3. An ink jet recording apparatus comprising:

5 a recording head for recording data on a  
recording medium by discharging ink from a plurality  
of discharge ports;

a carriage having the recording head mounted  
thereon for reciprocally scanning the surface of said  
recording medium;

10 recording medium carrying means for carrying  
said recording medium by a predetermined distance in  
the direction perpendicular to said scanning  
direction of said carriage each time the carriage  
reciprocally scans the surface of said recording  
15 medium;

an ink storage tank placed in a position where  
reciprocal scanning by said carriage and carrying of  
said recording medium by said recording medium  
carrying means are not affected by the ink storage  
20 tank;

a supply tube for supplying ink from the ink  
storage tank to said recording head; and

said control means for controlling ink discharge  
states of said recording head in accordance with an  
25 image signal input from a host computer; wherein

said control means controls the repetitive  
recording scanning frequency of the carriage in

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accordance with the temperature of the ink supplied from said ink tank to said ink supply tube.

4. The ink jet recording apparatus according to claim 1, wherein a pressure smoothing tank capable of storing a predetermined capacity of ink in order to suppress a negative pressure rise in said supply tube is set between said supply tube and said recording head.

5. The ink jet recording apparatus according to claim 4, wherein the predetermined capacity of said pressure smoothing tank is 1 cc or more.

6. The ink jet recording apparatus according to claim 1, wherein said ink tank comprises a temperature sensor.

7. The ink jet recording apparatus according to claim 1, further comprising recovery system means for recovering the ink discharge state of said recording head to a preferable state by forcibly discharging ink from each discharge port of said recording head.

8. The ink jet recording apparatus according to claim 1, wherein said recording head comprises an

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electrothermal converting element for converting electric energy ~~into~~ thermal energy to discharge ink by using the film boiling generated in ink by the thermal energy applied by the electrothermal element.

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9. A recording control method for an ink jet recording apparatus comprising a recording head for recording data on a recording medium by discharging ink from a plurality of discharge ports, a carriage
- 10 having the recording head mounted thereon for reciprocally scanning the surface of said recording medium, recording medium carrying means for carrying said recording medium by a predetermined distance in the direction perpendicular to the scanning direction
- 15 of said carriage each time said carriage reciprocally scans the surface of said recording medium, an ink storage tank placed in a position where reciprocal scanning by said carriage and carrying of said recording medium by said recording medium carrying
- 20 means are not affected by the ink storage tank, and a supply tube for supplying ink from the ink storage tank to the recording head, and control means for controlling ink discharge states of said recording head in accordance with an image signal input from a
- 25 host computer, comprising:

a step of lowering the scanning speed of said carriage when the temperature of the ink supplied

from said ink tank to said ink supply tube is lower than a reference temperature.

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10. A recording control method for an ink jet  
5 recording apparatus comprising a recording head for recording data on a recording medium by discharging ink from a plurality of discharge ports, a carriage having the recording head mounted thereon for reciprocally scanning the surface of said recording  
10 medium, recording medium carrying means for carrying said recording medium by a predetermined distance in the direction perpendicular to the scanning direction of said carriage each time said carriage reciprocally scans the surface of said recording medium, an ink  
15 storage tank placed in a position where reciprocal scanning by said carriage and carrying of said recording medium by said recording medium carrying means are not affected by the ink storage tank, and a supply tube for supplying ink from the ink storage  
20 tank to said recording head, and control means for controlling ink discharge states of said recording head in accordance with an image signal input from a host computer, comprising:

25 a step of increasing a non-recording time during which no ink is discharged from said recording head when the temperature of the ink supplied from said ink tank to said ink supply tube is lower than a

reference temperature.

11. A recording control method for an ink jet  
recording apparatus comprising a recording head for  
5 recording data on a recording medium by discharging  
ink from a plurality of discharge ports, a carriage  
having the recording head mounted thereon for  
reciprocally scanning the surface of said recording  
medium, recording medium carrying means for carrying  
10 said recording medium by a predetermined distance in  
the direction perpendicular to the scanning direction  
of said carriage each time said carriage reciprocally  
scans the surface of said recording medium, an ink  
storage tank placed in a position where reciprocal  
15 scanning by said carriage and carrying of said  
recording medium by said recording medium carrying  
means are not affected by the ink storage tank, and a  
supply tube for supplying ink from the ink storage  
tank to said recording head, and control means for  
20 controlling ink discharge states of said recording  
head in accordance with an image signal input from a  
host computer, comprising:

a step of increasing the repetitive recording  
scanning frequency by said carriage when the  
25 temperature of the ink supplied from said ink tank to  
said ink supply tube is lower than a reference  
temperature.

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